Fixed Income

Quiz 5 *October 2, 2017*

Problems. Show all work. Clearly indicate your answer to each question. For the purposes of this quiz you may assume that all 6-month periods are exactly one-half of a year.

Today is Wednesday, November 14, 2018. You observe the following Treasury notes on Bloomberg (for November 15 settlement):

Note	Coupon	Maturity	Price (% of par)
1	9.00%	May 15, 2019	101.9512
2	5.00%	Nov. 15, 2019	99.3500

1. (**40 points**) What are the 6-month and 1-year spot rates (expressed on a bond-equivalent basis) in this case?

2. (**10 points**) What are the 6-month and 1-year discount factors?

3. Suppose that you also see the following note on the same day:

Note	Coupon	Maturity	Price (% of par)
3	3.50%	Nov. 15, 2019	97.0000

(a) (**15 points**) What should the price of this note be according to the absence of arbitrage?

(b) (**35 points**) Demonstrate the arbitrage trade and show the cash flows from the trade on all relevant dates.